

WHAT IS CLAIMED IS:

1. An isolated nucleic acid that encodes a
5 Serine/Threonine/Tyrosine protein kinase, comprising:
 - (a) a nucleotide sequence selected from the group consisting of:
 - (i) SEQ ID NO: 1;
 - (ii) the complement of the sequences set
10 forth in (i);
 - (iii) the nucleotide sequence of SEQ ID NO: 2;
 - (iv) a degenerate variant of the sequences set forth in (iii); and
 - (v) the complement of the sequences set
15 forth in (iii) and (iv); or
 - (b) a nucleotide sequence selected from the group consisting of:
 - (i) a nucleotide sequence that encodes a
20 polypeptide having the sequence of SEQ ID NO: 3;
 - (ii) a nucleotide sequence that encodes a polypeptide having the sequence of SEQ ID NO: 3, with conservative amino acid substitutions; and
 - (iii) the complement of the sequences set
25 forth in (i) and (ii),wherein said isolated nucleic acid comprising a nucleotide sequence selected from group (b) is no more than about 100 kb in length.
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2. The isolated nucleic acid of claim 1 wherein said nucleic acid, or the complement of said nucleic acid, encodes a polypeptide having Serine/Threonine/Tyrosine protein

kinase activity.

3. The isolated nucleic acid of claim 1, wherein said nucleic acid, or the complement of said nucleic acid, is expressed
5 in adult liver, bone marrow, brain, colon, fetal liver, heart, kidney, lung, placenta, and skeletal muscle as well as a cell line HeLa.
4. A nucleic acid probe, comprising the nucleic acid of claim
10 1.
5. The probe of claim 4, wherein said probe is detectably labeled.
- 15 6. The probe of claim 4, attached to a substrate.
7. A microarray, wherein at least one probe of said array is a probe according to claim 4.
- 20 8. The isolated nucleic acid molecule of claim 1, wherein said nucleic acid molecule is operably linked to one or more expression control elements.
9. A replicable vector comprising a nucleic acid molecule of
25 claim 1.
10. A replicable vector comprising an isolated nucleic acid molecule of claim 8.
- 30 11. A host cell transformed to contain the nucleic acid molecule of any one of claims 1 or 8 - 10, or the progeny thereof.

12. A method for producing a polypeptide, the method comprising: culturing the host cell of claim 11 under conditions in which the protein encoded by said nucleic acid molecule is expressed.
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13. An isolated polypeptide produced by the method of claim 12.
14. An isolated polypeptide, comprising:
- 10 (a) an amino acid sequence of SEQ ID NO: 3;
- (b) an amino acid sequence having at least 65% amino acid sequence identity to that of (a);
- (c) an amino acid sequence according to (a) in which at least 95% of deviations from the sequence of
- 15 (a) are conservative substitutions; or
- (d) a fragment of at least 8 contiguous amino acids of any of (a) - (c).
15. A fusion protein, said fusion protein comprising a
- 20 polypeptide of claim 14 fused to a heterologous amino acid sequence.
16. The fusion protein of claim 15, wherein said heterologous amino acid sequence is a detectable moiety.
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17. The fusion protein of claim 16, wherein said detectable moiety is fluorescent.
18. The fusion protein of claim 15, wherein said heterologous
- 30 amino acid sequence is an Ig Fc region.
19. An isolated antibody, or antigen-binding fragment or derivative thereof, the binding of which can be

competitively inhibited by a polypeptide of claim 14.

20. A transgenic non-human animal modified to contain the nucleic acid molecule of any one of claims 1 or 8 - 10.

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21. A transgenic non-human animal unable to express the endogenous orthologue of the nucleic acid molecule of claim 1.

10 22. A method of identifying agents that modulate the expression of STTK, the method comprising:
contacting a cell or tissue sample believed to express STTK with a chemical or biological agent, and then
15 comparing the amount of STTK expression in said cell or tissue sample with that of a control,
changes in the amount relative to control identifying an agent that modulates expression of STTK.

20 23. A method of identifying agonists and antagonists of STTK, the method comprising:
contacting a cell or tissue sample believed to express STTK with a chemical or biological agent, and then
comparing the activity of STTK with that of a control,
25 increased activity relative to a control identifying an agonist, decreased activity relative to a control
identifying an antagonist.

24. A purified agonist of the polypeptide of claim 14.

30 25. A purified antagonist of the polypeptide of claim 14.

26. A method of identifying a specific binding partner for a polypeptide according to claim 14, the method comprising:

contacting said polypeptide to a potential binding partner; and
determining if the potential binding partner binds to said polypeptide.

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27. The method of claim 26, wherein said contacting is performed *in vivo*.

28. A purified binding partner of the polypeptide of claim 14.

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29. A method for detecting a target nucleic acid in a sample, said target being a nucleic acid according to claim 1, the method comprising:

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(a) hybridizing the sample with a probe comprising at least 17 contiguous nucleotides of a sequence complementary to said target nucleic acid in said sample under high stringency hybridization conditions, and

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(b) detecting the presence or absence, and optionally the amount, of said binding.

30. A method of diagnosing a disease caused by mutation in STTK, comprising:
detecting said mutation in a sample of nucleic acids that derives from a subject suspected to have said disease.

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31. A method of diagnosing or monitoring a disease caused by altered expression of STTK, comprising:
determining the level of expression of STTK in a sample of nucleic acids or proteins that derives from a subject suspected to have said disease,
alterations from a normal level of expression providing diagnostic and/or monitoring information.

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32. A diagnostic composition comprising the nucleic acid of claim 1, said nucleic acid being detectably labeled.
- 5 33. The diagnostic composition of claim 32, wherein said composition is further suitable for *in vivo* administration.
- 10 34. A diagnostic composition comprising the polypeptide of claim 14, said polypeptide being detectably labeled.
35. The diagnostic composition of claim 34, wherein said composition is further suitable for *in vivo* administration.
- 15 36. A diagnostic composition comprising the antibody, or antigen-binding fragment or derivative thereof, of claim 19.
- 20 37. The diagnostic composition of claim 36, wherein said antibody or antigen-binding fragment or derivative thereof is detectably labeled.
- 25 38. The diagnostic composition of claim 37, wherein said composition is further suitable for *in vivo* administration.
39. A pharmaceutical composition comprising the nucleic acid of claim 1 and a pharmaceutically acceptable excipient.
- 30 40. A pharmaceutical composition comprising the polypeptide of claim 14 and a pharmaceutically acceptable excipient.

41. A pharmaceutical composition comprising the antibody or antigen-binding fragment or derivative thereof of claim 19 and a pharmaceutically acceptable excipient.
- 5 42. A pharmaceutical composition comprising the agonist of claim 24 and a pharmaceutically acceptable excipient.
43. A pharmaceutical composition comprising the antagonist of claim 25 and a pharmaceutically acceptable excipient.
- 10 44. A method for treating or preventing a disorder associated with decreased expression or activity of STTK, the method comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition of any of claims 39, 40 or 42.
- 15 45. A method for treating or preventing a disorder associated with increased expression or activity of STTK, the method comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition of claim 41 or 43.
- 20 46. A method of modulating the expression of a nucleic acid according to claim 1, the method comprising:
- 25 administering an effective amount of an agent which modulates the expression of a nucleic acid according to claim 1.
- 30 47. A method of modulating at least one activity of a polypeptide according to claim 14, the method comprising: administering an effective amount of an agent which modulates at least one activity of a polypeptide according to claim 14.